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Apparatus and method for controlling the pour of molten metal into molds.

An apparatus and method for controlling the pour of molten metal into individuals molds. The apparatus comprises a reservoir (18) for holding molten metal to be poured into at least one mold (14) having a sprue (68) and a mold gating system, and a flow control device (28) operatively associated with the reservoir (18) for controlling the flow of molten metal from the reservoir (18) into the mold (14). A sensor (66) continuously senses the image of the surface of the molten metal in the mold sprue (68) and generates image area information representative of the surface area of the metal relative to the surface of the mold sprue (68). A processor (78) repetitively compares the image area information to a preselected reference area value and generates a difference value representative of the difference between the image area information and the reference area value. Control apparatus (88) responsive to the difference value generates a control signal to the flow control device (28) for controlling the flow of molten metal to minimize the difference.

EP 0 265 206 A3



EP 87 30 9212

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
X	GIESSEREI, vol. 71, no. 26, 17th December 1984, pages 997-998, Düsseldorf, DE; "Giessspiegelregelung zum automatischen Giessen" * Page 998, left-hand column *	1-5,10	B 22 D 37/00
Y	---	6-8,12	
X	DD-B- 206 950 (F. HUEBSCH) * Page 5, line 21 - page 6, line 13 *	1,3,10	
X	DE-A-2 631 015 (HITACHI LTD) * Page 13, line 19 - page 14, line 13; page 21, lines 7-33 *	1,6,10,12	
X,D	US-A-4 304 287 (MASCHINENFABRIK & EISENGIESSEREI) * Column 5, lines 8-30; column 6, lines 39-60 *	1,10-11	
X	DE-A-3 020 076 (MASCHINENFABRIK & EISENGIESSEREI) * Page 9, line 28 - page 10, line 34; page 14, lines 1-13 *	1,6,10,12	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
Y	FR-A-2 325 451 (BROWN, BOVERI & CIE AG) * Page 3, lines 12-35 *	6,8,12	B 22 D
Y	US-A-3 842 894 (SOUTHWORTH et al.) * Column 2, line 54 - column 3, line 40; column 3, line 64 - column 4, line 9 *	7	

The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 19-12-1988	Examiner DOUGLAS K.P.R.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	